Cleveland Clinic

Health Information

For Patients and the Community

A Patient's Guide to Blood Transfusions

Your doctor may order a blood transfusion as part of your therapy. This brochure will focus on frequently asked questions about blood products, transfusions, and the risks and benefits of the blood transfusion.

***PLEASE NOTE**: This information is not intended to replace the medical advice of your doctor or health care provider and is intended for educational purposes only. Individual circumstances will affect your individual risks and benefits. Please discuss any questions or concerns with your doctor.*

What is a blood transfusion?

A blood transfusion is donated blood given to patients with abnormal blood levels. The patient may have abnormal blood levels due to blood loss from trauma or surgery, or as a result of certain medical problems. The transfusion is done with one or more of the following parts of blood: red blood cells, platelets, plasma, or cryoprecipitate.

What are the potential benefits of a blood transfusion?

If your body does not have enough of one of the components of blood, you may develop serious life-threatening complications.

- Red blood cells carry oxygen through your body to your heart and brain. Adequate oxygen is very important to maintain life.
- Platelets and cryoprecipitate help to prevent or control bleeding.
- Plasma replaces blood volume and also may help to prevent or control bleeding.

How safe are blood transfusions?

Blood donors are asked many questions about their health, behavior, and travel history in order to ensure that the blood supply is as safe as it can be. Only people who pass the survey are allowed to donate. Donated blood is tested according to national guidelines. If there is any question that the blood is not safe, it is thrown away. However, there is still a very small chance that something will go undetected in the screening process.

To put this in perspective, let's look at your chances of getting a disease from a blood transfusion:

- HIV: 1 in 2 million cases
- Hepatitis C: 1 in 1 million cases
- Hepatitis B: 1 in 137,000 cases

For comparison, let's look at your lifetime odds for a few other things:

- struck by lightning: 1 in 700,000
- deadly plane crash: 1 in 500,000
- accidental drowning: 1 in 80,000
- deadly car accident: 1 in 5,000

Additional transfusion risks and reactions:

- severe allergic reaction
- human error
- bacterial contamination

- Transfusion-Related Acute Lung Injury (an immune reaction that affects a person's lungs)
- fever, chills, rash
- temporary decreased ability to fight infections
- fluid overload

These reactions may be mild or severe. Most mild reactions are not life-threatening when treated quickly. Severe transfusion reactions may be life-threatening.

Are there any alternatives?

The alternatives available and how well they work will depend on your situation.

If you need a transfusion, sometimes medications can be used in order to help your body to make its own blood. Some medications may also be used to prevent or control bleeding.

If the blood loss is too great, or if you are in a potentially life-threatening situation, these alternatives may not work quickly enough to help you. In these instances, there are no other options except for receiving the transfusion.

You do have the right to refuse a blood transfusion that your doctor has ordered. You must be aware of the risks and consequences of not accepting the transfusion. As a patient, you have the responsibility to discuss this with your physician before making your decision. Very often, the risks of not receiving a transfusion include loss of life or permanent disability.

What can I expect during the transfusion?

The nurse will check your blood pressure, pulse, and temperature before the transfusion is started. The blood will be given through your IV. Two nurses will check the blood at your bedside before starting the transfusion.

A nurse will check your blood pressure, pulse, and temperature after the transfusion has been running for 15 minutes, and again when the blood is completed.

Your transfusion will take anywhere from 1 to 3 hours. It may take a little longer, or it may even take less time depending on what component (part) of blood you are receiving.

How do I know if I am having a reaction?

A reaction can occur during a transfusion, up to a day following the transfusion, or even up to several months after the transfusion. Your nurse will watch you closely for a reaction. If a reaction occurs, the transfusion will be stopped.

During your transfusion, please let your nurse know immediately if you have any of the following symptoms:

- bleeding, pain, or new bruising at the IV site
- severe back pain
- fever, chills
- nausea, vomiting
- rash, hives, itching
- headache, dizziness
- cold, clammy skin
- chest pain
- fast heartbeat
- trouble breathing, wheezing
- dark or reddish urine
- yellowing of the skin or eyes

After the transfusion

If any of the listed symptoms develop after a blood transfusion, you may be having a transfusion reaction. If you are in the hospital, notify your nurse or doctor immediately.

If you have been discharged from the hospital and any of the above symptoms develop, contact your doctor immediately. If you are unable to reach your doctor, call 911 or go to the nearest Emergency Room.

After your transfusion, you should rest and take care not to overexert yourself for at least 24 to 48 hours. Once you are discharged, call to schedule a follow-up appointment with your primary care physician.

Additional information may be found at:

- American Association of Blood Banks (www.aabb.org)
- U.S. Food and Drug Administration (www.fda.gov)

Cleveland Clinic

9500 Euclid Avenue
Cleveland, OH 44195
800.223.2273
Hearing Impaired (TTY) Assistance: 216.444.0261
clevelandclinic.org

Developed by the Center for Consumer Health Information

3/12